

WHAT IS CLAIMED IS:

1. A phase-change optical information recording medium in which information can be recorded, reproduced and rewritten, comprising:

5 a first transparent substrate having a wobbling groove which is spirally formed thereon at a pitch;

 a first dielectric layer located overlying the first transparent substrate and having an optical thickness of from 80 nm to 200 nm;

10 a phase-change recording layer located overlying the first dielectric layer and having an optical thickness of from 20 nm to 50 nm when the phase-change recording layer is in an erased state;

 a second dielectric layer located overlying the
15 phase-change recording layer and having an optical thickness of from 10 nm to 70 nm;

 a reflection layer located overlying the second dielectric layer; and

 a second transparent substrate located overlying the
20 reflection layer.

2. The optical information recording medium according to Claim 1, further comprising a third dielectric layer between the second dielectric layer and the reflection layer.

25

3. The optical information recording medium according to Claim 1, further comprising an adhesive layer between the

reflection layer and the second transparent substrate.

4. The optical information recording medium according to Claim 1, further comprising a weather resistance layer between
5 the reflection layer and the second transparent substrate.

5. The optical information recording medium according to Claim 1, wherein the first transparent substrate has a refractive index of from 1.50 to 1.65 and a thickness of from
10 0.59 mm to 0.62 mm.

6. The optical information recording medium according to Claim 1, wherein the first transparent substrate has an absolute value of birefringence not greater than 50 nm.
15

7. The optical information recording medium according to Claim 1, wherein the pitch of the wobbling groove is from 0.70 μm to 0.80 μm , and the wobbling groove has an amplitude of from 15 nm to 40 nm, and wherein clock information is input in the
20 wobbling groove using a first sinusoidal wobble having a first phase and address information and disk information are input in the wobbling groove using a second sinusoidal wobble having a phase different from the first phase of the first sinusoidal wobble by 180°.

25

8. The optical information recording medium according to Claim 1, wherein the wobbling groove has a period of from 0.40

μm to 0.45 μm.

9. The optical information recording medium according to Claim 1, wherein the wobbling groove has a depth of from 22 nm
5 to 40 nm.

10. The optical information recording medium according to Claim 1, wherein the wobbling groove has a width of from 0.17 μm to 0.30 μm.

11. The optical information recording medium according to Claim 1, wherein the wobbling groove has a width, wherein record marks are formed in the phase-change recording layer along the wobbling groove, and wherein the record marks have
15 a width 0.9 to 1.5 times the width of the wobbling groove.

12. The optical information recording medium according to Claim 1, wherein the optical thickness of the phase-change recording layer is from 30 nm to 50 nm when the phase-change
20 recording layer is in an erased state.

13. The optical information recording medium according to Claim 2, wherein the combined optical thickness of the second and third dielectric layers is not more than 70 nm.

25

14. The optical information recording medium according to Claim 1, wherein the recording layer comprises Ag-In-Sb-

Te and contains from 1 to 5 atomic % of Ge.

15. The optical information recording medium according
to Claim 1, wherein each of the first and second transparent
5 substrates has a thickness, and wherein the thickness of the
second transparent substrate is the same as the thickness of
the first transparent substrate.